

- 22. Water Resources Bulletin
- 23. Water Resources Research

References were grouped based on topic similarities, annotated and cataloged using a standard format developed by the North Carolina State University Water Quality Group.

A distribution of topics (Table 1) suggests a disparity between scientific research of stream and the abundance of restoration projects completed or in progress across the country. The increasing need for restoration associated with water quality and aquatic habitat demands scientific evaluation to maximize the success rate of restoration practices. As stream restoration research increases, the literature database will be updated to reflect the growing interest in understanding restoration practices.

Table 1: Distribution by Topic of Accepted Literature Related to Stream Restoration.

Topic Number	Topic Description	Number of Articles
1	Approach/Guides	16
2	Channel Process and Geometry	22
3	Classification Systems	3
4	Design Principles/Structures	14
5	Evaluation and Monitoring	6
6	Biological Habitat	6
Total		67

Concepts Common Among Restoration Study

Concepts common throughout published literature emphasize overall approach and design. Most authors agree that the basic principles of stream restoration should include:

- analysis of channel history and evolution
- analysis of cause and effect of change
- analysis of current condition
- development of specific restoration goals and objectives prior to design
- holistic approach to account for channel process, riparian and aquatic function
- consideration of passive practices (such as fencing against livestock)
- natural channel design to restore function.

In most cases, the above concepts are widely accepted, however, there is limited published work in showing how these concepts can be implemented.

Channel Process and Geometry

Channel process, form and function related to water quality and aquatic resources are intensely researched, although few are specifically related to stream restoration. While limited in the scope of restoration, these references can be used to gain further understanding of channel networks. The selected literature for this review was chosen based on its potential use in stream restoration since it most closely relates to issues faced in restoration design.